

No. 5,041,132 to Miyata or U.S. Patent No. 4,935,659 to Naka et al. in view of U.S. Patent No. 4,945,275 to Honda, Vasilieu or U.S. Patent No. 5,103,128 to Adachi. Claim 38 was indicated to be allowable if rewritten to overcome the rejection under 35 U.S.C. §112, second paragraph, and to include all of the limitations of the base claim and any intervening claims. Claims 42-45, 49 and 50 were indicated to be allowable if amended to overcome the rejection under 35 U.S.C. §112, second paragraph.

Applicants and applicants' counsel note with appreciation the indication of allowable subject matter concerning claims 38, 42-45, 49 and 50.

In accordance with the present response, allowable dependent claim 38 has been rewritten in independent form to incorporate the subject matter of base claim 36. Claims 38, 42, 49 and 50 have also been amended to overcome the rejection under 35 U.S.C. §112, second paragraph. Claims 29-37, 39-41 and 46-48 have been cancelled without prejudice or admission. A new abstract which more clearly reflects the invention to which the amended claims are directed has been substituted for the previously submitted abstract.

In view of the foregoing, applicants respectfully submit that the rejection of claims 38, 42-45 and 49-50 under 35 U.S.C. §112, second paragraph, has been overcome and should be withdrawn.

Attached hereto is a marked-up version of the changes made to the abstract and claims by the current amendment. The attached pages i-vi are captioned "VERSION WITH MARKINGS TO SHOW CHANGES MADE".

In view of the foregoing amendments and discussion, the application is believed to be in allowable form. Accordingly, favorable reconsideration and allowance of the claims are most respectfully requested.

Respectfully submitted,

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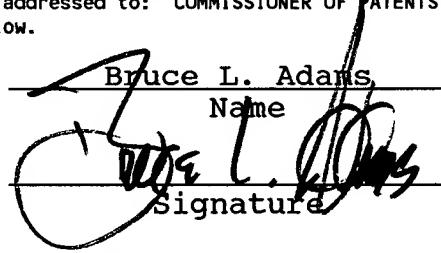
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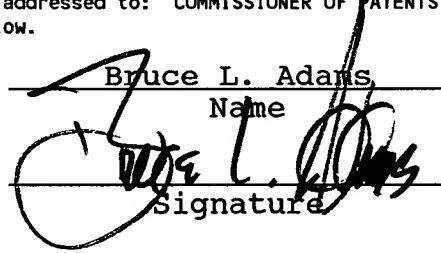
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January 29, 2003

Date



"VERSION WITH MARKINGS TO SHOW CHANGES MADE"

IN THE ABSTRACT:

The previously submitted abstract of the disclosure has been amended as follows:

A linear motion mechanism comprises a supersonic motor having a rotor which is rotationally driven by vibration of a vibrating body having a piezoelectric element. A first transmission member is connected to [mechanism is disposed on] the rotor for rotation therewith. A second transmission member has a first end portion contacting the first transmission member and a second end portion. The second transmission member is mounted for undergoing pivotal movement about a pivoting point disposed between the first and second end portions during rotation of the first transmission member. A moving body contacts the second end portion of the second transmission member to undergo [undergoes] linear movement in a direction crosswise to a longitudinal axis [of a rotational shaft] of the rotor in accordance with rotation of the first transmission member and pivotal movement of the second transmission member [mechanism]. A pressurizing mechanism presses the moving body into pressure contact with the second end portion of the second transmission member [mechanism].

IN THE CLAIMS:

Claims 38, 42, 49 and 50 have been amended as follows:

38. (Amended) A linear motion mechanism comprising:
a supersonic motor having a rotor which is
rotationally driven by vibration of a vibrating body having a
piezoelectric element;

a transmission member disposed on the rotor for
rotation therewith, the transmission member having a tapered
portion varying in thickness along a direction generally
perpendicular to a longitudinal axis of the rotor;

a moving body having an end portion in contact with
the transmission member for undergoing linear movement in a
direction generally parallel to the longitudinal axis of the
rotor in accordance with rotation of the transmission member,
[according to claim 36; wherein] the moving body [has] having
a tapered portion [for] contacting the tapered portion of the
transmission member, the tapered portion of the moving body
having a thickness which varies along a direction generally
perpendicular to the longitudinal axis of the [shaft.] rotor;
and

a pressurizing mechanism pressing the moving body
into pressure contact with the transmission member.

42. (Twice Amended) A linear motion mechanism comprising:

a supersonic motor having a rotor which is rotationally driven by vibration of a vibrating body having a piezoelectric element;

a first transmission member connected to the rotor for rotation therewith;

a second transmission member having a first end portion [for] contacting the first transmission member and a second end portion, the second transmission member being mounted for undergoing pivotal movement about a pivoting point disposed between the first and second end portions during rotation of the first transmission member;

a moving body [for] contacting the second end portion of the second transmission member [upon pivotal movement thereof] to undergo linear movement in a direction crosswise to a longitudinal axis [of a rotational shaft] of the rotor in accordance with rotation of the first transmission member and pivotal movement of the second transmission member; and

a pressurizing mechanism [for] pressing the moving body into pressure contact with the second end portion of the second transmission member.

49. (Twice Amended) A linear motion mechanism comprising:

a supersonic motor having a rotor which is rotationally driven by vibration of a vibrating body having a piezoelectric element;

a rotational body connected to the rotor for rotation therewith, the rotational body having a tapered portion varying in thickness along a direction generally perpendicular to a longitudinal axis [of a rotational shaft] of the rotor;

a moving body having a projecting portion [for] contacting the tapered portion of the rotational body to undergo linear movement in a direction generally parallel to the longitudinal axis of the [rotational shaft] rotor in accordance with rotation of the rotational body;

a [second] pressurizing mechanism [for] pressing the projecting portion of the moving body into pressure contact with the tapered portion of the rotational body;

a support member for supporting the supersonic motor; and

a guide member mounted on the support member for guiding the linear movement of the moving body.

50. (Twice Amended) A linear motion mechanism comprising:

a supersonic motor having a rotor which is rotationally driven by vibration of a vibrating body having a piezoelectric element;

a support member for supporting the supersonic motor;

a first pressing member [for] pressing the rotor into pressure contact with the vibrating body;

a rotational body connected to the rotor for rotation therewith, the rotational body having a tapered portion varying in thickness along a direction generally perpendicular to a longitudinal axis [of a rotational shaft] of the rotor;

a moving body having a projecting portion [for] contacting the tapered portion of the rotational body to undergo linear movement toward and away from the support member in a direction generally parallel to the longitudinal axis of the rotor [rotational shaft] in accordance with rotation of the rotational body;

a moving member connected to the moving body for undergoing linear movement therewith;

a guide member mounted on the support member for guiding the linear movement of the moving body and the moving member; and

a second pressing member [for] pressing the projecting portion of the moving body into pressure contact with the tapered portion of the rotational body.